

7. ACTION AND STRATEGY RECOMMENDATIONS

This section presents the IMS Team recommendations to improve the efficiency and effectiveness of intermodal transportation in Indiana as they relate to intermodal facilities and access links connecting intermodal facilities to the National Highway System (NHS).

The IMS recommendations are presented in terms of actions and strategies that INDOT should consider to address intermodal deficiencies identified through this study. Note the following two important points though:

- The reason the IMS team is recommending "considering" the actions and strategies identified through this study (as opposed to "implementing" them) is that Indiana's transportation needs are reflected by more than intermodal deficiencies. That is, the proposed actions and strategies must compete with other projects "on the table" for other reasons (e.g., corridor congestion). The projects must be prioritized based on current needs and future benefits as well as cost and other considerations. The upcoming study to develop a new and improved process for transportation planning at INDOT is best suited for such prioritization.
- The IMS recommendations are not project specific. That is, the study is not defining the type of project needed to address a given deficiency. Project definition generally requires detailed engineering analyses and site specific evaluations (e.g., should we add a lane, improve the alignment, add traffic control devices). Consequently, the IMS recommendations are really developed to help INDOT focus on the high priority deficiency areas for which to consider developing projects. Moreover, they are meant to identify the type of policy issues related to intermodal transportation and that warrant serious discussions.

The recommended actions also pertain to facilities currently under the jurisdiction of INDOT. Facilities that are owned by private concerns or under local jurisdictions are not included in the action-specific recommendations. For instance, several local access roads reflect deficiencies that the study would recommend for further consideration except for the fact that these facilities are under local jurisdictions. Similarly, NICTD reported significant deficiencies related to parking capacity and service levels that are not addressed by action recommendations.

However, our strategy recommendations also pertain to facilities not under INDOT's jurisdiction. The remainder of this section discusses general findings first and then presents the study's recommendations.

7.1 General Findings

In general, the IMS analysis results conclude that the intermodal deficiencies in Indiana were less severe than in other states. This contention is supported in part by the following findings:

- No railroad reported any constraints to efficient double-stack rail container movements.
- Though we had a representative from the Indiana Trucking Association on the Advisory Committee, no intermodal deficiencies were reported for the trucking mode. This could mean that there really are no significant problems, or that perhaps trucking companies' issues were not fully conveyed by or through their association.
- Most State residents can access a commercial airport within an hour of travel (see previous sections). This accessibility is significantly better than in other states, where many rural counties require more than 2 hours of travel to access a commercial airport.
- Most access links that connect the intermodal facilities of statewide significance to the National Highway System (NHS) provide reasonable mobility to freight and passenger markets (as measured by lost time due to congestion or cost of travel).

Conversely, the safety deficiencies identified by the IMS and the Advisory Committee stand out when compared to any other category. Actions recommended focus on the most severe deficiencies and combinations thereof (e.g., safety deficiencies that are also mobility deficiencies).

7.2 Safety Action Recommendations

Though the report presents several methods to rank safety deficiencies, we have selected the "total accident cost per access link" as the priority-setting measure. This is mainly to reflect the severity of the accidents and the total number of accidents at the same time. The cost measure is a function of both severity and frequency.

Based on this measure, safety related actions are recommended for the State/US access links to the following facilities:

- Conrail Avon intermodal freight facility
- Elkhart Municipal Airport
- Indianapolis International Airport (freight access)
- Purdue University, Lafayette.

The recommended actions for INDOT to consider include:

- Verification of Data

The IMS team recommends that INDOT verify all numbers by analyzing the long term trends for accidents. In some cases one accident involving multiple vehicles can skew the results of a statewide analysis. Historical accident data can be compiled from internal sources, MPOs and the Highway Patrol databases.

- Integration

The access links were deemed to be of statewide significance because they connect an intermodal facility of statewide significance to the NHS. In some cases, this connection includes a local access link component (e.g., the person access link to Union Station). In such cases, we recommend that INDOT work closely with the local agencies to ensure that the local component of the link is addressed in the same manner. In other words, if the transportation link is to be improved, the entire link needs to be addressed and not only the State/US component.

- Evaluation

The IMS team further recommends that INDOT evaluate the reasons for accidents for the aforementioned high priority access links and determine possible improvement projects.

- Costing and Prioritization

Feasible projects that reduce/eliminate the reasons for the accidents should then be included in the statewide prioritization scheme.

7.3 Mobility Action Recommendations

For mobility, the measure used for ranking deficiencies is "lost time per mile". This measure was selected because (a): it relates well to the public priorities (the average person does not understand volume to capacity ratios), and (b): it is normalized by distance to ensure that longer links do not get preferential treatment. Based on this measure, mobility action recommendations are presented for the following State/US access links:

- Park N Ride facility in Bloomington
- Mulzer Stone Port, Newburgh
- Amtrak station, South Bend
- Conrail Avon intermodal freight facility
- Indianapolis International Airport (freight access).

The recommended actions for INDOT to consider include:

- Coordination

The IMS team recommends that INDOT coordinates mobility deficiencies with MPOs whenever possible. This is especially true for mobility projects, since MPOs have responsibility for congestion management and mitigation in metropolitan areas. It is equally important to investigate whether some improvements related to these deficiencies are not already addressed by regional transportation improvement plans.

- Projection

Though much of the IMS data collection relied on MPOs as the primary source, INDOT should also work with the regional agencies to verify the data. Perhaps more importantly, it is recommended that future mobility conditions be evaluated using the regional travel demand models. Note that IMS performance measures were calculated using current data and therefore reflect current deficiencies. However, it is very conceivable that mobility deficiencies currently ranked third such as the State/US access link to the Amtrak station at South Bend may be projected to be the highest one within five years. Only calibrated travel demand models that are generally maintained by MPOs can project future needs with some measure of defensibility.

- Evaluation

It is important to consider a variety of options to mitigate each deficiency (for example, for person movement related deficiencies, transit, HOV and demand management options should be investigated).

- Deficiency Combination

It is important to note that links connecting two facilities of the IMS network to the NHS exhibited both types of deficiencies (i.e., safety and mobility). A higher priority should be placed on these links. These two facilities are: Conrail Avon intermodal freight facility and Indianapolis International Airport (freight access). For these, the IMS Team recommends combining the safety and mobility analyses and developing options that can potentially address them both (e.g., alignment redesign in concert with adding a truck-only lane).

- Costing and Prioritization

Feasible projects that address mobility deficiencies should then be included in the statewide prioritization scheme.

7.4 Strategy Recommendations

The transition from State Department of Highways to State Department of Transportation has brought on new and difficult challenges around the nation. Two specific sets of challenges relate to the IMS recommendations:

- Multi-Modal Focus

INDOT and other DOTs are facing the challenge of moving from a highway focus to a multi-modal focus. This in turn suggests a stronger interest in providing and/or coordinating transit services. However, transit generally requires an in-depth knowledge of local and/or regional transportation issues. Moreover, regional and local agencies already have at least partial responsibility for transit. The role INDOT plays in the "transit business" has a direct impact on intermodal deficiencies identified by the IMS process.

- Economic Development

ISTEA placed an emphasis on freight and goods movement and economic development. However, transportation needs of

economic development type projects generally benefit one locality or region at the expense of another. Again, when should INDOT participate in economic development projects and what form should such a participation take are questions that INDOT will likely address in the upcoming long range planning study. The answers again directly relate to deficiencies identified by the IMS process.

The scope of the IMS does not include establishing a long term framework for INDOT to define its role in transit development/operations and to address economic development transportation needs. However, such a long term framework would help address the following deficiencies:

- Parking Capacity

The intermodal facilities on the IMS with the highest need for increased parking capacity and/or additional transit service include East Chicago and Hammond NICTD stations, Indianapolis International, Clark County, and Eagle Creek airports.

- Level of Service

NICTD reported significant capacity constraints for its service that would require a combination of additional equipment and expanded right-of-way.

- Transit Access and Frequency

Some passenger facilities currently receive little or no transit service. These include: Fort Wayne International Airport; Evansville Regional Airport; Purdue University Airport; Hammond/Whiting Amtrak station; Elkhart Amtrak station; Waterloo Amtrak station; and Dune Park NICTD station.

- Economic Development

Fedex Corporation has projected an increase in business volume that would require it to significantly expand its facilities at Indianapolis International Airport. The expansion requires an alignment change for the I-70. Though such an expansion would translate into additional employment and taxes to the region, it is unclear how the project would get implemented. A similar, though more expensive project was discussed by Norfolk Southern railroad. The project would eliminate multiple (more than 60) railroad crossings for an entire corridor. This would reduce grade crossing

accidents, reduce lost time, and at the same time help the railroad be more competitive by allowing it to operate at higher speeds. Though the estimated cost of \$200 million makes this project difficult to implement, it is noteworthy to mention that in Southern California, a group of railroads, regional offices, and the ports of Long Beach and Los Angeles managed to secure more than \$2 billion in funding for a similar project.

To assist INDOT in defining its role, developing a multi-modal focus and addressing intermodal deficiencies, the IMS Team recommends the following broad-based strategies for consideration:

- Criteria for Transit Project Prioritization

It is inconceivable that INDOT can analyze transit needs in every county in the State. This would require a dedicated staff and to a great extent duplication of efforts already undertaken by regional and local agencies. However, the IMS Team recommends that INDOT develop and adopt specific criteria for evaluating and prioritizing transit projects and services. The criteria should (to the extent possible) favor inter-county or inter-regional travel to be consistent with INDOT's statewide perspective, as well as the ongoing Statewide Passenger Transportation Needs Assessment effort. The criteria should also take intermodalism into consideration (starting with deficiencies presented earlier if possible). Moreover, some criteria may need to address the transit service ability to reduce congestion and automobile travel. For instance, a significant reduction in travel could translate into reduced roadway maintenance costs, which in turn may elevate the priority of the transit project.

- Criteria for Economic Development Projects Prioritization

The criteria for evaluating and prioritizing economic development projects such as the Fedex alignment change on I-70 could also serve as a framework for deciding how INDOT should evaluate other similar projects. The challenging point here is how to balance the regional and local benefits derived from an economic development project versus the statewide needs. Many other states are struggling with this issue. Note that INDOT is currently working on the Major Corridor Study to help identify benefits of infrastructure improvement projects. Analysis tools developed during this study may be used to assist in evaluating and prioritizing economic development projects.

- Project Prioritization Modifications

INDOT has developed a preliminary "expansion" project prioritization scheme to help it rank needs and projects statewide. The IMS team recommends that the scheme modify its current "intermodal" ranking category to provide a higher weighting for deficiencies discussed throughout this section. Since these deficiencies relate to facilities of statewide significance, and they were developed with a large group of stakeholders, the IMS Team recommends elevating their priorities.